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Impact of Microcredit Programmes on Women Empowerment: An Empirical Study in West Bengal

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[**Abstract:** Based on an empirical study in West Bengal, this paper attempts to examine whether women's involvement in the microcredit programme through SHGs makes any positive change on women's empowerment that appears from the assessment on various indicators of power, autonomy and self-reliance, entitlement, participation, awareness and capacity-building. The study suggests that if women participating in the microcredit programme through SHGs sustain for some longer period (eight years or more), such a programme might contribute to higher level of women's empowerment than all types of control groups under study.]

1. THE PROBLEM

Why lend to women rather than to men? Nobel laureate Prof. Yunus (1998) is of the view that if the goals of economic development include improved standard of living, removal of poverty, access to dignified employment and reduction of inequality then it is quite natural to start with women. They constitute the majority of the poor, the under employed and the economically and socially disadvantaged. Hunger and poverty are more women's issues than male issue. Women experience hunger and poverty in much more intense ways than men. If one of the family members has to starve, it is an unwritten law that it has to be the mother. They are very close to children. When a destitute starts making some income, her dream invariably centre on her children. He also finds that traditional banks in Bangladesh are gender biased and do not want to lend money to women. Moreover, "a development reason to favour women", he says, "the

more, I got involved, the more I realised that credit given to women brought about changes faster than when given to men". (Yunus, 1998:88).

How does credit given to women bring about changes to women? The theme of Microcredit Summit, 1997, stressed on two issues to bring about changes to women: of reaching women and empowering them. Most of the self-help groups (SHGs) that are formed under current microcredit initiatives are those of women. There is no doubt about the fact that, given the current systems of microcredit, women have access to credit. However, empowerment is not dependent on mere access but on control of both the credit and the use to which that credit is put. Access does not automatically include control (Burra et.al. 2005:44). While evaluating the effect of microfinance programme on women empowerment, several studies yield mixed results. Some are in favour of the argument of the ability of microfinance to induce a process of economic, political and social empowerment whereas others, being more skeptical, point to a deterioration of women's overall well-being.

As to women's empowerment is concerned, generally the effects of the programme are largely positive (Rahman, 1986; Pitt and Khandker, 1995; Mahmud, 1994; Amin and Peibly, 1994; Huda and Mahmud, 1998; Steele et.al., 1998, Mayoux, 1998, Mahmud, 2003 Murthy et.al, 2005, Holvoet, 2005). Based on the findings from an ethnographic study and quantitative survey of Grameen Bank and Bangladesh Rural Advancement Committee (BRAC), Hashemi, Schuler and Riley (1996) argued that involvement in 'minimalist credit programme' does empower women by strengthening their economic roles, increasing their ability to contribute to their families' support. Minimalist credit programmes enabled women to negotiate gender barriers, increased their control over their own lives and improved their relative positions in the household.

Critics of minimalist credit argue that women's access to credit reinforces patriarchal norms of women's subordination, resulting to worsening of gender relationship and disempowerment (Goetz and Sen Gupta, 1996; Montgomery et.al., 1996; Rahman, 1999). Goetz and SenGupta (1996) find that a significant proportion of women's loans are directly invested by their male relatives, though women borrowers bear the liability for repayment. The phenomenon of loss of control of loan by women borrower and the intense pressure of timely repayment of loan increase tension and frustration within the family which produces new form of dominance over women by the members of family as well as microfinance institutions and that increase violence in the society (Rahman, 1999: 67).

How empowerment often is operationalised through decision making outcomes?

Both sociology and economics have subfields concerned with intra household relations and within these both have theories relying on access to resources to explain differences in power and welfare outcomes within household. They extend the theories to include social norms, values and culture as intervening variable in the ability to translate resources into intra household power, particularly for women. This is associated with Sen's(1999) idea of well-being freedom in order to access women's well-being versus just relying on these access to inputs. Micro level contexts in some contexts does not support that only in improvement in women's resources lead to their improved status (Jejeebhoy and Sathar,2001;Kabeer,1997;Malhotra and Mather,1997;Mizan,1994).The allocation of authority and control within household structures by social norms and values produce unequal gender relations where men command authority and resources (Kabeer,1995:224-28). In the household affairs, working women may successfully bargain over certain aspects of household expenditure but what remains non-negotiable is men's control over asset management decisions based on land, capital and other valuable assets related to household's affairs (Pant,2000:94). Moreover, if a family builds

property assets, it will have other sources of funds available to survive a crisis and thus become less dependent on strategies more harmful to women (Kantor, 2003:438). Likewise, women's welfare outcomes of a family are influenced by mobility decision since women themselves are constrained by the female seclusion norms about which families make decisions. Women's mobility levels have direct effects on women's ability to create and maintain links with people outside the family, including those who can help improve the operation of their enterprises (ibid).

How does the Women's membership of SHGs lead to empowerment? Since 1970, worldwide, policy makers and academicians started thinking as to how development programmes could be linked to poor women. There has been considerable rethinking on the impact and potential of self-help groups (SHGs) on rural poverty and empowerment of women since the Grameen bank first pioneered the concept in 1979. Professor Mohammad Yunus, Nobel laureate in peace, came up with this idea of providing small loans to the neighborhood poor households, particularly poor women households, those unable to provide collateral. The problem of women's access to credit was given emphasis at the first International Women's Conference in Mexico in 1975, which resulted in the establishment of the Women's World Banking network. In 1985, during the second International Women Conference in Nairobi, there was a mushrooming of government and non-government income generating programmes for women, most of which included savings and credit.

The existing literature suggests that the concept of formation of SHGs and linking to banks would raise incomes and broaden financial markets by providing credits to small scale entrepreneurs and thereby reduce poverty (Aghion and Morduch, 2000). It would also lead to women's empowerment since Micro Finance Programmes have mostly targeted women as clients (Littlefield, Morduch and Hashemi, 2003; Cheston and Kuhn, 2002).

The acceptance of gender equality in the Constitution of independent India provided women with a basis for a new identity, as full citizens of the republic and a source of their rights to equality, dignity and justice in other spheres of life (Gupta and Chattopadhyay, 2004: 111). Since the inception of the Fifth Five year Plan (1974-79) in India, women's interest have been highlighted into national policy (WCD, 2001). The SHG model was introduced as the core strategy to achieve empowerment in the Ninth plan (1997-2002) with the objective to organize women into SHG and thus mark the beginning of a major process of empowering women (Planning Commission, 1997).

Based on an empirical study of West Bengal, this paper thus attempts to examine whether women's involvement in the microcredit programme through SHGs makes any positive change under different criteria – power, autonomy and self-reliance, entitlement, participation and awareness and capacity-building- on women's empowerment. The underlying hypothesis is: (i) the average level of empowerment of women participating in the micro credit programme is higher for both NGO and non-NGO led programme than that of women participating in the microcredit programme among all control groups; and (ii) no perceptible difference is observed at the level of empowerment between NGO and non-NGO led microcredit programme under women SHGs (core group).

2. SURVEY DESIGN

The study is based on the data obtained from field survey (Primary source) from rural West Bengal. Final field survey is conducted on 370 households. More importantly, out of total households (370 households) selected for final survey, there are one core(policy) group(120 households) who were randomly selected from women SHGs participating under microcredit programme on SHG-NGO and SHG-Non-NGO models for eight years or more, and three types of control groups¹. The procedure of selecting households under core group and three control groups is in the following lines.

We conducted our field survey in Howrah, Hooghly, North 24 Paraganas and Nadia districts of West Bengal, the area of our study, under two stages-preliminary stage and final stage. We undertook pilot survey at preliminary stage mainly for two reasons. i) As per the secondary data (SIPRD, 2000 &2001;Sarker,2001), the microcredit programme is observed to be operative under two broad categories – SHG-NGO and SHG-non –NGO models- in West Bengal. Each category is further classified in three models². But in practice, NGO as Microfinance Institution and NGO as financial intermediaries do not exist separately while we conducted our survey. They are clubbed into a single category in our study area: NGO as financial intermediaries which is operative as one of the models of NABARD (NABARD, 2001-02). ii) To study the impact assessment of women borrowers' group(core/policy group)participating under SHG-NGO and SHG-non –NGO models of microcredit programme of this study, we consider those SHGs which exist in the programme for eight years or more at a stretch. But in practice, most SHGs which appeared in the secondary source were defunct while we conducted our survey. However, to select samples for final survey for core and control groups, we had to depend on pilot survey in some specific rural blocks having high concentration of SHGs under four districts- Howrah, Hooghly, North 24 Paraganas and Nadia – of West Bengal.

The selection of households for each group (core or control groups) for final survey is made on sequential sampling method. First, based on the procedure of SRSWOR, sample of SHGs for each group is made from population of SHGs obtained from pilot survey, and then households for each group are also randomly selected(SRSWOR) from sample SHGs from the same group. But, it is worthwhile to mention that the selection of SHGs for each group is made on the principle that the population of the same group for each model should be at least double of the sample.

As regards the selection of households for core group is concerned, at the first stage, some SHGs have been randomly selected from all SHGs which appear from our pilot survey and that are participating under micro credit programme for eight years or more related to the respective micro credit agency/ organization. 15 SHGs have been randomly selected for each model from out of 36 SHGs in Model 1 and 33 SHGs in Model 2 under SHG-NGO category. Similarly, 10 SHGs for each model have been randomly selected from out of 25 SHGs in Model 3, 24 SHGs in Model 4 and 22 SHGs in Model 5 under SHG –non- NGO category of total women SHGs which appears from pilot survey Also important to mention that the variation of the number of selection of SHGs for each category (SHG-NGO/ SHG-non-NGO) is due to non availability of equal number of SHGs, which exist eight years or more, in the pilot survey. At the second stage, 30 user members for each of two models under SHG-NGO category out of 15 sample SHGs and 20 user members for each of three models under SHG-non-NGO category out of 10 sample SHGs have been randomly selected (SRSWOR).The number of household for each category (SHG-NGO/ SHG-non-NGO) selected for final survey differ from each other because the number of households that appears from pilot survey is also different for different categories.. Total size of women sample borrowers (core/policy group) selected for final survey is $(30*2+20*3)=120$.

As regards the first control group is concerned, sequential sampling has also been used for selecting 40 men users of micro credit who are participating in the micro credit programme for eight years or more. At the first stage, 10 SHGs have been randomly selected from 24 men SHGs, which appears from pilot survey, who are participating in the micro credit programme for eight years or more under Tajmahal Gram Bikash Kendra of model-2 from SHG-NGO model, where NGO acts as financial intermediaries(FI). 5 SHGs have been randomly selected separately from 13 SHGs each,(emerging from pilot survey) of model-3 and model-5 respectively from SHG –

non-NGO model. Totalling in all, 20 men SHGs have been selected from model-2 (10 SHGs), model-3 (5SHGs) and model-5 (5 SHGs). The argument behind the exclusion of other models from the sample is that all micro credit agencies under model-1 and model - 4 are exclusively of women. At the second stage, for selecting households under first control group for final survey, 20 user (male) members' households are randomly selected from Tajmahal Gram Bikash Kendra under model -2 of SHG-NGO micro credit programme. But for model-3 and model-5 under SHG-non-NGO led micro credit programme 10 user (male) members' households for each model have been randomly selected from the respective male SHGs selected at the first stage. Total size of male sample borrowers who have been participating in the micro credit programme at a stretch for eight years or more has been fixed at 40 (20+10+10).

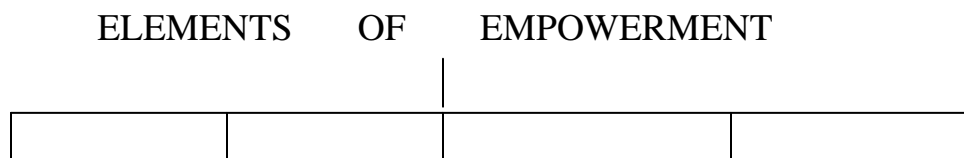
Concerning to the selection of second control group, two types of SHGs, operating under micro credit programme for at best one year, have been taken into consideration- women SHGs and male SHGs. For selection of women borrowers' households under control group, 15 women borrowers' households from each model under SHG-NGO category, are randomly selected from each 7 SHGs operating at best one year under respective model selected at the first stage by the pilot survey, and 10 women borrowers' households from each model under SHG-non- NGO category, are randomly selected from each 5 SHGs (operating at best one year) under respective model selected at the first stage from the pilot survey. It is worthwhile to mention that the selection of SHGs of each model under the second control group is based on the criterion of close proximity (nearest in distance) of the SHGs of each model under core group. However, total female borrowers under second control group is $(15*2+10*3) = 60$. Similarly, the selection of male borrowers under second control group is made following the same criteria used in selecting women borrowers under second control group. Owing to the lack of existence of male SHGs, operating at best one year and within close proximity (nearest in distance)

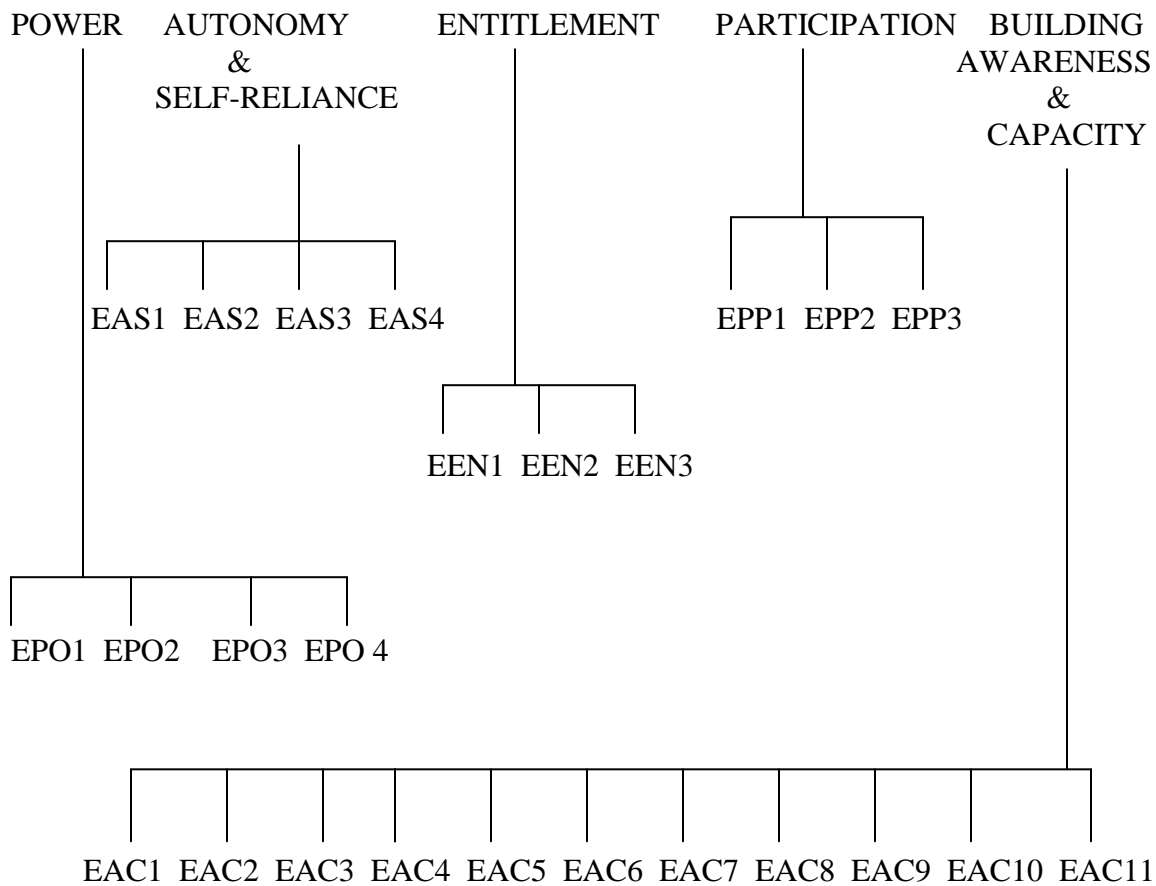
of the SHGs under core group, the sample of male borrowers under second control group is less in relation to the female borrower under the same control group. Thus, as per the availability of data, 10 men borrowers' households have been randomly selected for each of Model 2, Model 3 and Model 5. The number of men SHGs for each model operating at best one year is 7 which appears from pilot survey. Total male sample under second control group is $10 \times 3 = 30$.

In order to select the households (120 households) for the third control group through 'propensity score matching'³, 120 households have been selected randomly from 250 households, who are eager to join the micro credit programme but have not yet joined the programme, from pilot survey. However, combining core group and three types of control groups (first, second and third control group) together, total sample size taken for final survey is 370 [120(core group) +40(1st control group)+90(2nd control group) +120(3rd control group)] and all samples for this study have been taken from 4 districts – Howrah, Hooghly, 24 Paraganas(North) and Nadia. The Preliminary (pilot) survey and final surveys have been conducted between March, 2006 and August, 2007.

2. METHODOLOGY

Empowerment is a multidimensional on-going process. In view of its operationality and ability to capture the level and process of women's empowerment, five broad elements - power, autonomy and self-reliance, entitlement, participation and awareness and capacity-building - have been taken into account. A scheme representation of elements together with its various indicators for assessing empowerment of women is presented in the following Structure:





Indicators of ‘power’ (I) element:

- 1) Ability to take decision at the household level (EPO 1)
- 2) Ability to control resources (EPO 2)
- 3) Ability to control sources of power (EPO 3)
- 4) Ability to challenge societal power relation (EPO 4)

Indicators of ‘Autonomy and Self-reliance’ (II):

- 1) Freedom of action (EAS 1)
- 2) Possession of critical elements to effectively and efficiently undertake desired activity (EAS 2)
- 3) Level of sense of self (EAS 3)
- 4) Absence of unsolicited influence in decision-making (EAS 4)

Indicators of ‘Entitlement’ (III):

- 1) Rights to equitable share of resources i.e. ‘Exchange entitlement’ (EEN 1)

- 2) Rights to equitable share of inherited property i.e. ‘Inheritance and Transfer entitlement’ (EEN 2)
- 3) Rights to equitable access to resources (EEN 3)

Indicators of ‘Participation’ (IV):

- 1) Level of influencing decision (EPP 1)
- 2) Level of providing material, labour, finance and management input to the project/programme (EPP 2)
- 3) Level of acceptance of responsibilities/ consequences of decision (EPP 3)

Indicators of ‘Building of awareness and capacity’ (V) :

- 1) Ability to manage productive resources (EAC 1)
- 2) Ability to develop alternative economic structures locally (EAC 2)
- 3) Ability to create alternative employment at local level (EAC 3)
- 4) Ability to interact effectively in public sphere (EAC 4)
- 5) Ability to participate in non-family group (EAC 5)
- 6) Action to bring gender equality (EAC 6)
- 7) Legal and political awareness (EAC 7)
- 8) Ability to organize struggle (EAC 8)
- 9) Ability to fight injustice (EAC 9)
- 10) Ability to transform institutions (family, education, religion) (EAC 10)
- 11) Ability to transform structures (legal, political, economic and social) (EAC 11)

Every indicator of each element has been measured by four- point scale: high (4), medium (3), fair (2) and low (1).The criteria for evaluation related to the assessment of each indicator is in the following:

INDICATORS FOR THE ASSESSMENT OF THE ‘POWER’ELEMENT

Criteria for evaluation

| INDICATORS OF 'POWER' ELEMENT OF EMPOWERMENT | HIGH (4) | MEDIUM (3) | FAIR (2) | LOW (1) |
|---|---|--|---|---|
| EPO 1: Power to make decision at household level | a) Equal or more say in acquiring, using & divesting fixed assets | – | | a) Very little or no say in acquiring, using & divesting fixed assets |
| | b) Equal or more say in routine income & expenditure | b) Equal or more say in routine income & expenditure | – | b) Very little or no say in routine income & expenditure |
| | c) Equal or more say in selecting employment | c) Equal or more say in selecting employment | – | c) Very little or no say in selecting employment |
| | d) Equal or more say in children's education, health etc. | d) Equal or more say in children's education, health etc. | a) Equal or more say in children's education, health etc. | d) Very little or no say in children's education, health etc. |
| EPO 2: Ability to control resources | Complete ownership of resources. | Equal ownership of resources. | Partial ownership of resources. | No ownership of resources. |
| EPO 3: Ability to control sources of power | Ability to be head of a body/ institution. | Ability to make someone head of the local body/ institution. | Ability to be member of the local body. | Inability to be member of the local body |
| EPO 4: Ability to challenge societal power relations. | Ability to mobilise mass . | Ability to resist individually. | Ability to raise issues in local body . | Inability to raise a voice in public forum. |

INDICATORS OF THE 'AUTONOMY & SELF-RELIANCE'

Criteria for evaluation

| INDICATORS OF 'AUTONOMY & SELF- | HIGH (4) | MEDIUM (3) | FAIR (2) | LOW (1) |
|---------------------------------|----------|------------|----------|---------|
| | | | | |

| | | | | |
|--|---|--|--|--|
| RELIANCE' | | | | |
| EAS 1: Freedom of action & mobility | a)Purchase assets <i>without consulting with husband</i> /any male member | a)Purchase assets <i>after consulting withhusband</i> /any male member | – | a)Very little or no freedom to purchase assets. |
| | b)Full freedom to purchase household chores. | b)Full freedom to purchase household chores. | a) Freedom to purchase household chores <i>after consulting with husband</i> | b)Very little or no freedom to purchase household chores . |
| | c)Work outside the village (<i>sole decision</i>) | c)Work outside the village <i>after consulting with husband</i> | – | c)Very little or no freedom to work outside the village . |
| | d)Freedom in deciding number of children they can have & adopting family planning measure | – | – | d)No freedom in deciding number of children they can have & adopting family planning measure |
| | e)Freedom in choosing life partner | – | | e) Nofreedom in choosing life partner |
| | f)Visits bank, NGO office alone | f)Visit bank, NGO office (not alone) | | f)Nofreedom to visit bank, NGO office |
| | g)Visits health centre alone | g)Visit health centre (not alone) | | g)can't visit health centre |
| | h)Visits natal home (sole decision) | h)Visits natal home <i>after consulting with husband</i> | Visits natal home <i>after consulting With husband</i> | h)No freedom to visit natal home (sole |
| EAS 2: Possession of critical elements (human K) | a)woman's level of education – secondary or above | a))woman's level of education – primary | a)woman's level of education – primary | a)woman is illiterate or can sign only |
| | b)woman is experienced for 7-8 years | b)woman is experienced for 1-2 years | b) No experience | b) No experience |
| | c)woman is fully trained | c)woman is partially trained | c)No training | c)No training |

| | | | | |
|--|--|---|---|---|
| | d)health-good | d)health-good | d)health-not good | d)frequently sick |
| EAS 3:Sense of self | a) woman protests alone&if necessary informs to local P.S. | - | - | a)Very little or no ability to protest. |
| | b) feel the importance of education &training for women. | a) feel the importance of education &training for women. | - | b)Very little or no feelings |
| | c)feel the need of safe & protected shelter & sanitation for women | b) feel the need of safe & protected shelter & sanitation for women | a)feel the need of safe & protected shelter & sanitation for women | c) Very little or no feelings |
| | c)feel the need of equal amt.of food for women. | c)feel the need of equal amt.of food for women. | - | d)Very little or no feelings |
| EAS 4: Absence of unsolicited influences in decision making. | a)None can influence woman's decision making. | a)Only husband can influence woman's decision making. | a)Any elder member of family can influence woman's decision making. | a)Anyone can influence woman's decision making. |

INDICATORS OF 'ENTITLEMENT'

Criteria for evaluation

| INDICATORS OF 'ENTITLEMENT' | HIGH (4) | MEDIUM (3) | FAIR (2) | LOW (1) |
|------------------------------------|--|---|---|---|
| EEN 1:Exchange Entitlement | a)women get same type of job. | a)women get same type of job. | a)women get inferior type of job. | women get no job. |
| | b)women earn moreor equal by selling non-labour asset | b)women earn equal by selling non-labour asset | women earn equal by selling non-labour asset | women earn lower by selling non-labour asset |
| | c)women earn more or | c)women earn equal | women earn low | women earn low |

| | | | | |
|--|--|--|--|--|
| | equal by selling labour asset & her power of management is high/ equal | by selling labour asset but power of management is low. | by selling labour asset & power of management is low | by selling labour asset & power of management is low |
| | d)Cost of purchasing of resources is equal or low. | d)Cost of purchasing of resources is equal. | Cost of purchasing of resources is equal. | Cost of purchasing of resources is more. |
| | e)Value of the product that she can sell is equal /more. | Value of the product that she can sell is low. | Value of the product that she can sell is low. | Value of the product that she can sell is low |
| | f)women &men get same wage. | women get low wage | women get low wage | women get very low wage |
| | g)women &men receive equal social benefit &pay equal tax. | women &men receive equal social benefit & pay more tax. | women receive lower social benefit &pay more tax. | women receive lower social benefit & unable to pay taxes |
| EEN 2: Inheritance& Transfer Entitlement | Women &men inherit property equally &selling power of the property is equal. | Women &men inherit property equally &selling power of the property is lower for women. | Women &men inherit property but not equally &selling power of the property is low. | Women &men inherit property not equally but selling power of the property is nil |
| EEN 3:Access to resources | a)Equal access to immovable property | – | – | Nil |
| | b) Equal access to durable &movable property | Equal access to durable &movable property | – | Nil |
| | c)Equal financial access | Equal financial access | – | Nil |
| | d)Equal | Equal access to | Equal access to | Nil |

| | | | | |
|--|---------------------------------|----------------------|----------------------|--|
| | access to personal health care. | personal health care | personal health care | |
|--|---------------------------------|----------------------|----------------------|--|

INDICATORS OF 'PARTICIPATION'

Criteria for evaluation

| INDICATORS OF 'PARTICIPATION' | HIGH (4) | MEDIUM (3) | FAIR (2) | LOW (1) |
|---|---|--|--|--|
| EPP 1: Level of influencing decision in a project | women influence decision at the stage of 'conception', 'implementation' & 'operation' | women influence decision at any two stage of project life. | women influence decision at any one stage of project life. | women never influence decision. |
| EEN 2: Level of providing material, labour, finance&management to the project/ programme. | women provide all four inputs. | women provide material, labour&finance | women provide material+labour or finance+labour. | women provide labour but not adequately. |
| EEN 3:Level of acceptance of responsibility/ consequences of decision | always follow the decision held in the meeting& accordingly perform their duty. | women sometimes follow the decision. | women follow the decision in a few cases only | women have no responsibility. |

INDICATORS OF 'BUILDING AWARENESS & CAPACITY'

Criteria for evaluation

| INDICATORS OF 'BUILDING AWARENESS & CAPACITY' | HIGH (4) | MEDIUM (3) | FAIR (2) | LOW (1) |
|--|---|---|--|---|
| EAC 1: Ability to manage productive resources | women themselves use resources for the desired purpose | Sometimes women use & sometimes men use but women supervise it. | Only men use the productive resources, women supervise it but power of supervision low | women never use & never supervise it. |
| EAC 2: Ability to develop alternative economic structure locally | women form cooperative at the village level & it runs successfully | women have formed cooperative but they don't always get cheap inputs or marketing facility. | women form cooperative at the village level but it does not run successfully | No formation of cooperative by women. |
| EAC 3: Ability to create alternative employment at local level | Create at least 3 alternative employment. | Create at least 2 alternative employment | Create at least 1 alternative employment | Create no alternative employment |
| EAC 4: Ability to interact effectively in public sphere | Ability to interact effectively in most of the public spheres. | Ability to interact effectively in a few public spheres. | Ability to interact effectively only in local club/SHG | Inability to interact effectively in any public sphere. |

For the sake of simplicity, all indicator of each element of empowerment in the exercise have been treated as having equal weights, though in practice, the weights tend to differ across indicators. There are four indicators of '*Power*' (EPO), four indicators of '*Autonomy and Self-reliance*' (EAS), three indicators of '*Entitlement*' (EEN), three indicators of '*Participation*' (EPP) and eleven indicators of '*Awareness and Capacity building*' (EAC). An individual who scores "high" on all indicators of "power" element, has a total score of 16 (4 multiplied by 4), while that who scores "low" on all indicators of "power" element, has a total score of 4 (1 multiplied by 4). But the average score (simple arithmetic mean) for the former is 4 (total score divided by total indicators of power), while the latter is 1 ((total score divided by total indicators of power). The average score of a particular element of empowerment represents its level i.e. the highest level an individual may score from 'power' is 4, the lowest score being 1. Similarly, the mean (A.M.) of all elements' level indicate the empowerment value of the selected women. However, the highest empowerment level for an individual woman is 4, whereas the lowest is 1.

3. RESULTS & DISCUSSIONS

Five important elements namely – power, autonomy and self-reliance, entitlement, participation and awareness and capacity-building have been adopted to measure the level of women's empowerment of this study. As mentioned in the methodology chapter, every indicator corresponding to each element has been measured

by four point scale with equal weight. The range of empowerment level lies between 4 (the highest level of empowerment) and 1 (the lowest level of empowerment).

We first attempt to measure the level of empowerment based on each element of women's empowerment. Power is the key element of empowerment because it is the ability, actual and potential, to exercise command and control over resources and ideology (Pant, 2000:93). Out of highest average score 5, the average score received by all female borrower groups in all models – NGO and non –NGO –ranges between 2.33 and 2.80 (Table 1.1). It implies that all female borrower groups (core group) receive the level of power which is either little less than their median or somewhat higher than their median level, although in most cases average score is higher than their median level (Table 1.1). This result is not far from unity for entitlement element of empowerment (Table 1.3), although the performance of scores is the highest for participation element of empowerment (Table 1.4), and much better for autonomy and self-reliance (Table 1.2). However, for one element of empowerment (process of building awareness and capacity building), the average level of scores is lower than their median level for four models out of five, despite the fact that individual average scale for each model is greater than or equal to 2.0 (Table 1.5).

On the other hand, for all elements of empowerment (Table 1.1-1.5), the average level of scores is much lower than their median level for first control group (male borrower group participating in the micro credit programme for at least eight years), second control group (male and female participating in the micro credit programme for at best one year) and third control group (female have not at all participated in the microcredit programme but have the potential to join the programme) compared with female borrower group (core group of study). No significant difference is observed regarding average level of scores among three control groups.

Combining all elements together, Table 2 shows that the level of women's empowerment under female borrower group is considerably higher (ranging between 2.50 and 2.84) than either of the first control group (male borrower groups)-ranging between 1.52 and 1.77-or of the second control groups (ranging between 1.36 and 1.54) or of the third control group(ranging between 1.16 and 1.28).Although empowerment level for male borrower group is somewhat higher than other two control groups ,no discernable difference of the level of empowerment is observed among three control groups. This study, however, seems to support our *hypothesis(i)*that the average level of empowerment of women participating in the micro credit programme is higher for both NGO and non-NGO led programme than that of women participating in the microcredit programme among all control groups. This study also lends credence to the fact that no perceptible difference is observed at the level of empowerment between NGO and non-NGO led programmes under female borrower group (core group), which seems to support our *hypothesis(ii)*.

However one of the main issues emerging out from this study is that women's own involvement and participation in the micro credit programme contribute to the higher level of empowerment than all control groups. Male's participation does not point to any significant improvement to the women's empowerment level (first control group). Rather the patriarchal power relation in the male SHGs, which participate in the microcredit programme for at least eight years (first control group),or both male and female SHGs participating in the microcredit programme for at best one year (second control group), or both male and females who have not at all participated in the microcredit programme but have the potential to join the programme (third control group), does not seem to provide equal space for women in the process of women's empowerment. Studies have also revealed that consumer's choice is irrelevant to women under patriarchal power structure; neither as producer nor as consumer does women have the freedom of choice allotted to a

women (Bell, 1977); even in public patriarchy, the appropriation particularly of women's labour is a more collective level (Walby, 1990); women's subordinated position is represented by patriarchal power (Batliwala, 1993).

However, there are instances that considerable improvement in women's empowerment has made by women's participation in decision making and has shown an impressive curtailment in male monopoly of assets in AWARE (Action for Welfare and Awakening in Rural Environment) villages (Narasimham,1999). Narasimham's(1999) study also supports that women's participation in the micro credit programme for some longer duration (core group) has more positive impact on women's empowerment.

4. Conclusions and Policy Implications

This study, however, lends credence to the fact that women's active involvement in micro credit programme through SHGs supported by various agencies – SHG-NGO / SHG-non –NGO – has resulted in attitudinal and visible changes among women and has increased their ability to deal with their problems, particularly, in respect of household's asset management, own mobility, health status of children and the member of households. Such a programme has also helped them to gain some access and control over their own income, if not equally with their male counterpart. However, women's micro credit programme through SHGs, supported by various agencies, needs to be expanded under comprehensive community development programme in all areas of West Bengal, not only as one of the most important means of empowering women and augmenting their households' income and assets but also for utilizing women's knowledge and skills as full partners in the developmental process.

As the empowerment strategies of empowerment encompass individual, interpersonal and institutional level of practice (a multilevel process), large and dynamic NGOs and institutional organizations should involve in executing training for women's

skill development, expansion of their education, building women's perception of self-worth of members within the household and in the public sphere. Such an effort might help women to assert their independent rights to make choices and control resources, both which will assist in challenging and eliminating their subordination.

TABLE 1.1
LEVEL OF 'POWER' ELEMENT

| Indicators of 'power' | Female borrower group | | | | | Control group | | | | |
|-----------------------|-----------------------|-------------|-------------|-------------|-------------|-----------------------|---------------------------------|---------------------------------|-----------------------|---------------------------------|
| | NGO-led | | non-NGO-led | | | model 1 | model 2 | model 3 | model 4 | model 5 |
| EPO 1 | 2.83 | 2.93 | 2.80 | 2.60 | 2.60 | 1.35 [1.01] | 2.20 (1.85) [1.70] | 1.60 (1.90) [1.75] | 1.60 [1.40] | 1.65 (1.70) [1.55] |
| EPO 2 | 2.80 | 2.43 | 2.30 | 2.10 | 1.95 | 1.40 [1.13] | 1.20 (1.45) [1.20] | 1.30 (1.50) [1.19] | 1.40 [1.10] | 1.30 (1.20) [1.05] |
| EPO 3 | 2.93 | 2.87 | 3.55 | 2.45 | 2.80 | 1.85 [1.25] | 2.00 (2.05) [1.70] | 1.85 (2.10) [1.55] | 2.00 [1.50] | 1.75 (1.40) [1.20] |
| EPO 4 | 2.60 | 2.57 | 2.65 | 2.15 | 2.35 | 1.15 [1.05] | 1.90 (1.40) [1.30] | 1.25 (1.50) [1.05] | 1.40 [1.15] | 1.35 (1.20) [1.00] |
| AVERAGE LEVEL | 2.79 | 2.70 | 2.80 | 2.33 | 2.43 | 1.40 [1.11] | 1.83 (1.69) [1.48] | 1.50 (1.75) [1.39] | 1.60 [1.29] | 1.51 (1.38) [1.20] |

Source: sample survey

The figure in () represents the figure corresponding to control group 1 (male borrower group)

The figure without bracket represents the figure corresponding to control group 2 (those who have joined at best 1 year).

The figure in [] bracket represents the figure corresponding to control group 3 (those who have not joined at all but have the potential to join the microcredit programme).

TABLE 1.2

LEVEL OF 'AUTONOMY & SELF-RELIANCE'

| | Female Borrower Group | | | | | Control Group | | | | |
|--|-----------------------|-------------|-------------|-------------|-------------|-----------------------|---------------------------------|---------------------------------|-----------------------|---------------------------------|
| | NGO-led | | non-NGO led | | | model 1 | model 2 | model 3 | model 4 | model 5 |
| Indicators of 'autonomy & self-reliance' | model 1 | model 2 | model 3 | model 4 | model 5 | | | | | |
| EAS 1 | 2.83 | 2.87 | 2.85 | 2.85 | 2.65 | 1.50 [1.15] | 2.30 (1.45) [1.50] | 1.70 (2.30) [1.55] | 1.90 [1.50] | 1.70 (1.70) [1.45] |
| EAS 2 | 2.83 | 2.83 | 3.04 | 2.65 | 2.40 | 1.95 [1.67] | 1.60 (2.30) [1.90] | 1.75 (2.10) [1.30] | 2.10 [1.70] | 2.25 (1.80) [1.55] |
| EAS 3 | 3.03 | 3.03 | 3.25 | 2.90 | 2.90 | 2.10 [1.70] | 2.30 (2.20) [1.45] | 2.20 (2.80) [1.80] | 2.60 [1.20] | 2.55 (2.60) [1.50] |
| EAS 4 | 2.77 | 3.03 | 2.70 | 2.60 | 2.60 | 1.35 [1.20] | 2.10 (1.75) [1.35] | 1.55 (1.90) [1.30] | 1.60 [1.20] | 1.65 (1.70) [1.50] |
| AVERAGE LEVEL | 2.87 | 2.94 | 2.96 | 2.75 | 2.64 | 1.70 [1.43] | 2.10 (1.93) [1.55] | 1.80 (2.30) [1.49] | 2.05 [1.58] | 2.04 (1.95) [1.56] |

Source: sample survey

The figure in () represents the figure corresponding to control group 1 (male borrower group).

The figure without bracket represents the figure corresponding to control group 2 (those who have joined at best 1 year).

The figure in [] bracket represents the figure corresponding to control group 3 (those who have not joined at all but have the potential to join the microcredit programme).

TABLE 1.3
LEVEL OF 'ENTITLEMENT' ELEMENT

| Indicators of 'entitlement' | Female borrower group | | | | | Control group | | | | |
|-----------------------------|-----------------------|-------------|-------------|-------------|-------------|-----------------------|---------------------------------|---------------------------------|-----------------------|---------------------------------|
| | NGO-led | | non-NGO led | | | model 1 | model 2 | model 3 | model 4 | model 5 |
| EEN 1 | 3.30 | 3.20 | 3.35 | 3.05 | 2.60 | 1.30 [1.09] | 1.50 (1.85) [1.30] | 1.50 (1.80) [1.25] | 1.70 [1.30] | 1.55 (2.20) [1.75] |
| EEN 2 | 1.13 | 1.30 | 1.05 | 1.05 | 1.00 | 1.00 [1.00] | 1.00 (1.00) [1.00] | 1.00 (1.00) [1.00] | 1.10 [1.05] | 1.05 (1.30) [1.00] |
| EEN 3 | 3.23 | 3.33 | 3.10 | 3.20 | 2.80 | 1.30 [1.15] | 1.50 (1.85) [1.40] | 1.40 (2.00) [1.25] | 1.50 [1.20] | 1.30 (2.30) [1.15] |
| AVERAGE LEVEL | 2.55 | 2.61 | 2.50 | 2.43 | 2.13 | 1.20 [1.08] | 1.33 (1.57) [1.23] | 1.30 (1.60) [1.17] | 1.43 [1.18] | 1.30 (1.93) [1.30] |

Source: sample survey

The figure in () represents the figure corresponding to control group 1 (male borrower group).

The figure without bracket represents the figure corresponding to control group 2 (those who have joined at best 1 year).

The figure in [] bracket represents the figure corresponding to control group 3 (those who have not joined at all but have the potential to join the microcredit programme).

TABLE 1.4
LEVEL OF 'PARTICIPATION' ELEMENT

| | Female borrower group | | | | | Control group | | | | |
|-------------------------------|-----------------------|-------------|-------------|-------------|-------------|-----------------------|---------------------------------|---------------------------------|-----------------------|---------------------------------|
| | NGO-led | | non-NGO led | | | model 1 | model 2 | model 3 | model 4 | model 5 |
| Indicators of 'participation' | model 1 | model 2 | model 3 | model 4 | model 5 | | | | | |
| EPP 1 | 3.40 | 3.27 | 3.50 | 3.25 | 3.15 | 1.30 [1.10] | 1.20 (1.55) [1.25] | 1.30 (1.90) [1.35] | 1.30 [1.20] | 1.35 (1.30) [1.25] |
| EPP 2 | 3.63 | 3.37 | 3.20 | 3.60 | 3.05 | 1.40 [1.25] | 1.60 (1.00) [1.15] | 1.45 (1.80) [1.20] | 1.50 [1.35] | 1.30 (1.70) [1.20] |
| EPP 3 | 3.30 | 3.57 | 3.45 | 3.55 | 3.05 | 1.35 [1.10] | 1.10 (1.05) [1.00] | 1.20 (1.70) [1.30] | 1.10 [1.00] | 1.20 (1.60) [1.30] |
| AVERAGE LEVEL | 3.44 | 3.40 | 3.38 | 3.47 | 3.12 | 1.35 [1.15] | 1.30 (1.20) [1.13] | 1.32 (1.80) [1.28] | 1.30 [1.18] | 1.28 (1.53) [1.25] |

Source: sample survey

The figure in () represents the figure corresponding to control group 1 (male borrower group).

The figure without bracket represents the figure corresponding to control group 2 (those who have joined at best 1 year).

The figure in [] bracket represents the figure corresponding to control group 3 (those who have not joined at all but have the potential to join the microcredit programme).

TABLE 1.5
LEVEL OF 'BUILDING AWARENESS AND CAPACITY (EAC)'

| Indicators of EAC element | Female borrower group | | | | | Control group | | | | |
|---------------------------|-----------------------|-------------|----------------|-------------|-------------|-----------------------|---------------------------------|---------------------------------|-----------------------|---------------------------------|
| | NGO – led | | non – NGO- led | | | model 1 | model 2 | model 3 | model 4 | model 5 |
| EAC 1 | 2.97 | 2.80 | 2.60 | 2.55 | 2.65 | 1.45 [1.20] | 1.50 (1.70) [1.01] | 1.70 (1.70) [1.10] | 1.40 [1.15] | 1.35 (2.10) [1.20] |
| EAC 2 | 1.20 | 1.87 | 1.00 | 1.10 | 1.00 | 1.00 [1.00] | 1.00 (1.00) [1.00] | 1.05 (1.00) [1.00] | 1.30 [1.20] | 1.10 (1.10) [1.05] |
| EAC 3 | 2.23 | 2.40 | 2.35 | 2.40 | 2.05 | 1.05 [1.00] | 1.00 (1.00) [1.00] | 1.00 (1.00) [1.00] | 1.20 [1.00] | 1.00 (1.10) [1.00] |
| EAC 4 | 2.97 | 2.97 | 3.10 | 2.95 | 2.60 | 1.15 [1.00] | 1.10 (1.25) [1.09] | 1.05 (2.00) [1.00] | 1.10 [1.00] | 1.10 (2.10) [1.00] |
| EAC 5 | 2.27 | 2.27 | 2.20 | 2.20 | 2.05 | 1.00 [1.00] | 1.20 (1.15) [1.10] | 1.05 (1.10) [1.00] | 1.20 [1.00] | 1.10 (1.10) [1.10] |
| EAC 6 | 2.80 | 2.90 | 2.85 | 2.65 | 2.65 | 1.05 [1.05] | 1.10 (1.20) [1.00] | 1.00 (1.70) [1.00] | 1.30 [1.05] | 1.10 (2.00) [1.00] |
| EAC 7 | 3.20 | 3.30 | 3.20 | 2.90 | 2.55 | 1.85 [1.20] | 1.70 (1.60) [1.10] | 1.70 (2.10) [1.10] | 1.40 [1.20] | 1.75 (2.60) [1.07] |
| EAC 8 | 1.53 | 2.47 | 2.20 | 2.10 | 1.95 | 1.00 [1.00] | 1.00 (1.10) [1.00] | 1.00 (1.40) [1.10] | 1.10 [1.05] | 1.05 (1.60) [1.02] |
| EAC 9 | 2.20 | 2.37 | 1.90 | 1.75 | 1.75 | 1.10 [1.00] | 1.00 (1.05) [1.00] | 1.00 (1.50) [1.00] | 1.00 [1.00] | 1.00 (1.60) [1.00] |
| EAC 10 | 1.60 | 3.43 | 1.65 | 1.50 | 1.45 | 1.00 [1.00] | 1.00 (1.10) [1.00] | 1.00 (1.20) [1.00] | 1.10 [1.00] | 1.05 (1.30) [1.00] |
| EAC 11 | 1.70 | 2.40 | 1.15 | 1.45 | 1.30 | 1.05 [1.00] | 1.00 (1.05) [1.00] | 1.00 (1.00) [1.00] | 1.20 [1.05] | 1.10 (1.20) [1.00] |
| AVERAGE LEVEL | 2.24 | 2.56 | 2.20 | 2.14 | 2.00 | 1.15 [1.04] | 1.15 (1.20) [1.03] | 1.14 (1.40) [1.03] | 1.21 [1.06] | 1.15 (1.62) [1.04] |

Source: sample survey

The figure in () represents the figure corresponding to control group 1 (male borrower group). The figure without bracket represents the figure corresponding to control group 2 (those who have joined at best 1 year). The figure in [] bracket represents the figure corresponding to control group 3 (those who have not joined at all but have the potential to join the microcredit programme).

TABLE 2

LEVEL OF 'EMPOWERMENT OF WOMEN'

| | Female Borrower Group | | | | | Control Group | | | | |
|-------------------------------|-----------------------|-------------|-------------|-------------|-------------|-----------------------|---------------------------------|---------------------------------|-----------------------|---------------------------------|
| | NGO-led | | non-NGO-led | | | | | | | |
| Elements of Empowerment | model 1 | model 2 | model 3 | model 4 | model 5 | model 1 | model 2 | model 3 | model 4 | model 5 |
| Power | 2.79 | 2.70 | 2.80 | 2.33 | 2.43 | 1.40 [1.11] | 1.83 (1.69) [1.48] | 1.50 (1.75) [1.39] | 1.60 [1.29] | 1.51 (1.38) [1.20] |
| Autonomy & Self-reliance | 2.87 | 2.94 | 2.96 | 2.75 | 2.64 | 1.70 [1.43] | 2.10 (1.93) [1.55] | 1.80 (2.30) [1.49] | 2.05 [1.58] | 2.04 (1.95) [1.56] |
| Entitlement | 2.55 | 2.61 | 2.50 | 2.43 | 2.13 | 1.20 [1.08] | 1.33 (1.57) [1.23] | 1.30 (1.60) [1.17] | 1.43 [1.18] | 1.30 (1.93) [1.30] |
| Participation | 3.44 | 3.40 | 3.38 | 3.47 | 3.12 | 1.35 [1.15] | 1.30 (1.20) [1.13] | 1.32 (1.80) [1.28] | 1.30 [1.18] | 1.28 (1.53) [1.25] |
| Building Awareness & Capacity | 2.24 | 2.56 | 2.20 | 2.14 | 2.00 | 1.15 [1.04] | 1.15 (1.20) [1.03] | 1.14 (1.40) [1.03] | 1.21 [1.06] | 1.15 (1.62) [1.04] |
| Empowerment level of Women | 2.78 | 2.84 | 2.77 | 2.60 | 2.50 | 1.36 [1.16] | 1.54 (1.52) [1.28] | 1.40 (1.77) [1.27] | 1.52 [1.26] | 1.46 (1.68) [1.27] |

Source: sample survey

The figure in () represents the figure corresponding to control group 1 (male borrower group).

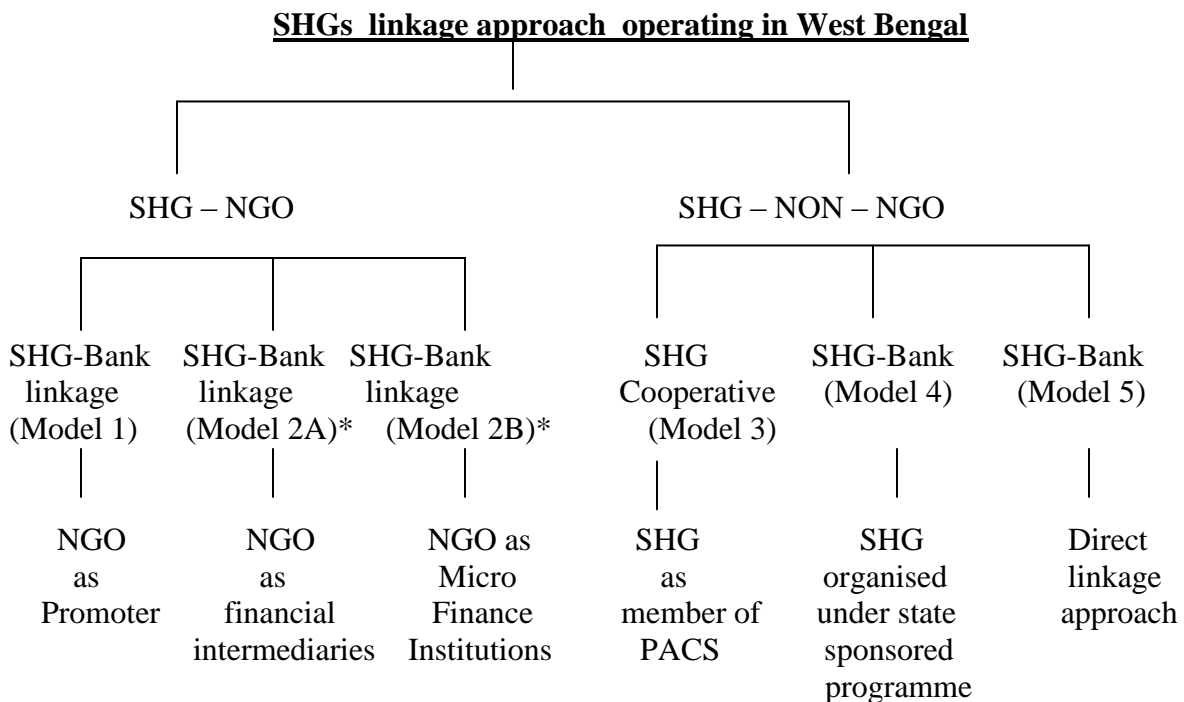
The figure without bracket represents the figure corresponding to control group 2 (those who have joined at best 1 year).

The figure in [] bracket represents the figure corresponding to control group 3 (those who have not joined at all but have the potential to join the microcredit programme).

Notes

1 First control group has 60 households selected randomly from male SHGs participating under microcredit programme on SHG-NGO and SHG-Non-NGO models for eight years or more; second control group has 60 households selected randomly from those women SHGs from both SHG-NGO and SHG-Non-NGO models which have participated in the microcredit programme for at best one year; third control group has 120 households selected through ‘propensity score matching’ technique from the households who are eager to join the micro credit programme but have not yet joined the programme.

2. Broadly, there are mainly two different models which have emerged under the SHG-linkage approach operating microfinance activities in West Bengal. Each of the two different models is further classified into three linkage approaches in the following (as per Secondary Data).



* While we undertook pilot survey at preliminary stage in order to examine whether all models exist in practice, we found NGO as Microfinance Institution and NGO as financial intermediaries do not exist separately. Therefore, Model 2A and Model 2B have

been clubbed together into a single category termed as Model 2 (NGO as Financial Intermediaries).

3. The propensity score is a conditional probability that an individual is assigned to the treatment group (Rosenbaum and Rubin, 1983). Generally, it is estimated by using logistic regression (i.e. logit model) with the covariates collected from the participants as X and the participant's status on the treatment variable as Y (Rosenbaum, 1987). The covariates in the logit model are non-treatment variables such as the participant's background characteristics. The estimated propensity score abstracts the information of these covariates.

The true propensity score (P) is the conditional probability that an individual belongs to the treatment group (Rosenbaum & Rubin, 1983). It is functionally related to the covariates (X , in a vector format), noted as the *logit model* of $\ln\left(\frac{P}{1-P}\right) = \beta'X$, indicating the natural logarithm of the odds (i.e., the ratio of P to $1-P$) is a linear combination of covariates, X . The propensity score estimated by a function of $\hat{P} = (1 + e^{-\hat{\beta}'X})^{-1}$, summarizes the distribution information of all potential covariates (Rosenbaum & Rubin, 1984).

Using estimated propensity scores, a participant from the treatment group can be matched with a participant from the control group so that treatment group and control group can be balanced. This approach can significantly reduce bias in observational study (Rosenbaum, 1987, 2004; Rosenbaum and Rubin, 1985; Rubin and Thomas, 1992)

The aim of matching is to find the closest comparison group from a sample of non-participants to the sample of programme participants. 'Closest' is measured in terms of observable characteristics.

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